

REMARKS

Claims 1-20 are pending in the present application. Claims 1-20 are rejected. Claims 6 and 17 are herein canceled. Claims 1, 7, 14, 18 and 19 are herein amended. No new matter has been entered.

Claim Rejections - 35 U.S.C. §103

Claims 1-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over EP 1097967A2 in view of Patent No. 5,545,485 to Hashitani et al., US Patent No. 3,971,753 to Frechtling et al., and US Patent No. 6,890,546 to Mollison et al.

The Examiner asserts that EP '967 discloses biodegradable resin compositions that comprise biodegradable polyester resin such as polylactic acid and additives such as fillers, anionic surfactants, fibrous materials, flame retardants and nucleating agents

The Examiner admits that EP '967 does not suggest the encapsulation of the filler in biodegradable resin, but the Examiner asserts that EP '967 does suggest encapsulation of the filler with a surfactant to improve the dispersibility of the filler in the biodegradable resin.

The Examiner asserts that Hashitani et al. discloses a biodegradable resin molded article derived from a biodegradable resin and a biodegradable additive. The Examiner notes that a biopolymer having biodegradability may be used as one of the additives.

The Examiner concludes that it would have been obvious to utilize coated filler materials such as taught by Frechtling et al. as a biodegradable filler material as taught by Hashitani et al. to fulfill the filler material suggested by EP '967. Furthermore, the Examiner concludes that it would have been obvious to utilize a time-released or biodegradable coating for that filler material such as taught by Mollison et al. if biodegradable properties for the filler material were desired. The prior art does not indicate that the biodegradable resin used to encapsulate the filler should be different than the biodegradable resin substrate of the composition. The Examiner asserts that it is obvious to use the same biodegradable resin for both applications to achieve a homogeneous composition.

Applicants herein amend the claims to clarify the invention. Thereafter, Applicants respectfully disagree with the rejection, and submit that the references even when combined do not teach all of the claimed limitations of the present invention.

Applicants note that in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success. (Manual of Patent Examining Procedure §2142). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure.

Applicants note that in the broadest independent claims, the present invention is a biodegradable resin composition comprising a biodegradable first resin; and a filler distributed in said biodegradable first resin and coated with a biodegradable coating second resin, wherein the biodegradable first resin and the biodegradable coating second resin are identical types of resins.

Applicants note that none of EP '967, Hashitani et al. and Mollison et al. discloses the claimed limitation of a filler distributed in a first resin and encapsulated in a second resin, wherein the first resin and second resin are identical types of resins. The references variously simply disclose a filler in a resin.

Applicants note that Frechtling et al. discloses a method of forming a filled polymer, which method comprises the steps of:

coating a filler substrate with a free radical organic polymerization initiator containing carboxyl or carboxamide groups having an affinity for and which adhere to the surface of said substrate;

contacting the initiator-coated substrate with an amount of an ethylenically unsaturated monomer sufficient to at least cover the total surface area of said initiator coated substrate; and

maintaining the temperature of the initiator coated substrate ethylenically unsaturated monomer combination at a point where the initiator decomposes to form free radicals until a layer of the ethylenically unsaturated monomer polymerizes on the substrate.

The above steps result in a polymer-coated filler, which is then dispersed in another polymer to form a composite. This is described in the reference in column 3, lines 18-29, wherein it is described that the filler particles may be first coated with a layer of polymer and in

a second step the polymer coated filler blended with a quantity of the same polymer or another polymer or combination of polymers, which affords a means of improving compatibility between the filler and the polymer where it is desired to prepare a filler reinforced composite in which the uncoated filler and the continuous polymer phase are not compatible.

Applicants note that the above description teaches that the polymer coating and the polymer matrix may be the same or different, and a specific example of this is Example 3, wherein both the polymer coating and the polymer matrix are polymethyl methacrylate.

However, the present claim, as herein amended, recite that “the biodegradable resin and the biodegradable coating resin are *an aliphatic polyester resin*”. These claimed limitations are not taught or suggested by any of the cited references, alone or in combination. Particularly with respect to Frechtling et al., the disclosed resins are not aliphatic polyester resins. Therefore, Applicants traverse the present rejection because not all of the claimed limitations are taught or suggested by the cited references.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants’ undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No. 10/629,611
Attorney Docket No. 030922

Amendment under 37 C.F.R. §1.111
Amendment filed: August 29, 2006

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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